



# Safety Data Sheet

## Magnesium Hydroxide, Powder

According to Federal Register / Vol.77, No. 58 / Monday, March 26, 2012 / Rules and Regulations  
Revision Date: 05/2023      Supersedes: 10/2022      Version 7.0

### SECTION 1: IDENTIFICATION

#### 1.1 Product Identifier

Product Form: Powder  
Product Name: Magnesium Hydroxide, Powder, AlkapHix®

#### 1.2 Intended Use of the Product

For use in industrial applications such as industrial process streams and industrial and municipal wastewater treatment/odor control.

#### 1.3 Name, Address, and Telephone of the Responsible Party

Company: GARRISON MINERALS  
11901 W 48th Avenue  
Wheat Ridge, CO 80033  
sales@garrisonminerals.com  
720.389.7609

#### 1.4 Emergency Telephone Number

Emergency Number: 720-389-7609

### SECTION 2: HAZARDS IDENTIFICATION

#### 2.1 Classification of the Substance or Mixture

Classification (GHS-US) Not Classified

#### 2.2 Label Elements

GHS-US Labeling No Labeling applicable

#### 2.3 Other Hazards

Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions.

#### 2.4 Unknown Acute Toxicity

(GHS-US) No Data Available

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Mixture Not applicable

Name	Product Identifier	% (w/w)	Classification (GHS-US)
Magnesium Hydroxide	(CAS No) 1309 -42-8	97-100	Not Classified

Full text of H-phrases: see section 16



# Safety Data Sheet

## Magnesium Hydroxide, Powder

According to Federal Register / Vol.77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision Date: 05/2023

Supersedes: 10/2022

Version 7.0

### SECTION 4: FIRST-AID MEASURES

#### 4.1 Description of First Aid Measures

- General** Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
- Inhalation** When symptoms occur: go into open air and ventilate suspected area. Obtain medical attention if breathing difficulty persists.
- Skin Contact** Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Obtain medical attention if irritation develops or persists.
- Eye Contact** Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if irritation develops or persists.
- Ingestion** Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

#### 4.2 Most Important Symptoms and Effect Both Acute and Delayed

- General** Not expected to present a significant hazard under anticipated conditions of normal use. Dust may cause mechanical irritation to eyes, nose, throat, and lungs.
- Inhalation** Prolonged contact with large amounts of dust may cause mechanical irritation.
- Skin Contact** Skin contact with large amounts of dust may cause mechanical irritation.
- Eye Contact** Eye contact with dust may cause mechanical irritation.
- Ingestion** Ingestion is likely to be harmful or have adverse effects.
- Chronic Symptoms:** Not Available

#### 4.3 Indication of Any Immediate Medical Attention and Special Treatment Needed

- General** If exposed or concerned, get medical advice and attention



# Safety Data Sheet

## Magnesium Hydroxide, Powder

According to Federal Register / Vol.77, No. 58 / Monday, March 26, 2012 / Rules and Regulations  
Revision Date: 05/2023      Supersedes: 10/2022      Version 7.0

### SECTION 5: FIRE-FIGHTING MEASURES

#### 5.1 Extinguishing Media

Suitable Extinguishing Media: Use extinguishing media appropriate for surrounding fire.  
Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire

#### 5.2 Special Hazards Arising from the Substance or Mixture

Fire Hazard: Not considered flammable  
Explosion Hazard: Product is not explosive.  
Reactivity: Hazardous reactions will not occur under normal conditions.

#### 5.3 Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire  
Firefighting Instructions: Use water spray or fog for cooling exposed containers  
Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.  
Hazardous Combustion Products: None known  
Reference to Other Sections: Refer to section 9 for flammability properties

### SECTION 6: ACCIDENTAL RELEASE MEASURES

#### 6.1 Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Avoid breathing (dust, mist, fumes). Avoid prolonged contact with eyes, skin and clothing.

##### 6.1.1 For Non-Emergency Personnel

Protective equipment: Use appropriate personal protection equipment (PPE).  
Emergency Procedures: Evacuate unnecessary personnel.

##### 6.1.2 For Emergency Personnel

Protective equipment: Equip cleanup crew with proper protection.  
Emergency Procedures: Ventilate area.

#### 6.2 Environmental Precautions

Prevent entry to sewers and public waters

#### 6.3 Methods and Material for Containment and Cleaning Up

For Containment: Avoid generation of dust during clean-up of spills  
Methods for Cleaning Up: Clear up spills immediately and dispose of waste safely. Recover the product by vacuuming, shoveling or sweeping. Avoid generation of dust during clean-up of spills.



# Safety Data Sheet

## Magnesium Hydroxide, Powder

According to Federal Register / Vol.77, No. 58 / Monday, March 26, 2012 / Rules and Regulations  
 Revision Date: 05/2023      Supersedes: 10/2022      Version 7.0

### SECTION 6: ACCIDENTAL RELEASE MEASURES

6.4 Reference to Other Sections:      See heading 8, Exposure Controls and Personal Protection.

### SECTION 7: HANDLING AND STORAGE

7.1 Precautions for Safe Handling:  
 Hygiene Measures:      Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work.

7.2 Conditions for Safe Storage, Including any Incompatibilities  
 Technical Measures:      Comply with applicable regulations  
 Storage Conditions:      Store in a dry, cool and well-ventilated place, keep container closed when not in use. Keep/Store away from extremely high or low temperatures, incompatible materials.  
 Incompatible Materials:      Strong acids, strong bases, strong oxidizers, halogenated compounds, reactive metal powders.

7.3 Specific End Use(s)      For use in industrial applications such as industrial process streams and industrial and municipal wastewater treatment/odor control.

### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control Parameters      For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), NIOSH (REL), OSHA (PEL), Canadian provincial governments, or the Mexican government.

Particulates not otherwise classified (PNOC) (RR-00072-6)		
USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup> respirable fraction 10 mg/m <sup>3</sup> total dust
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup> respirable fraction 15 mg/m <sup>3</sup> total dust
Alberta	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (total)
British Columbia	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (total dust)
Manitoba	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (inhalable particles, recommended)



# Safety Data Sheet

## Magnesium Hydroxide, Powder

According to Federal Register / Vol.77, No. 58 / Monday, March 26, 2012 / Rules and Regulations  
 Revision Date: 05/2023      Supersedes: 10/2022      Version 7.0

### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Particulates not otherwise classified (PNOC) (RR-00072-6)		
New Brunswick	OEL TWA (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup> (particulate matter containing no Asbestos and <1% Crystalline silica, respirable fraction)
Newfoundland & Labrador	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (inhalable particles, recommended)
Nova Scotia	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (inhalable particles, recommended)
Nunavut	OEL TWA (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup> (respirable mass)
Northwest Territories	OEL TWA (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup> (respirable mass)
Ontario	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (inhalable)
Prince Edward Island	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (inhalable particles, recommended)
Québec	VEMP (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (including dust, inert or nuisance particulates; containing no Asbestos and <1% Crystalline silica-total dust)
Saskatchewan	OEL STEL (mg/m <sup>3</sup> )	20 mg/m <sup>3</sup> (insoluble or poorly insoluble-inhalable fraction)
Saskatchewan	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (insoluble or poorly soluble-inhalable fraction)

### 8.2 Exposure Controls

**Appropriate Engineering Controls:** Avoid creating or spreading dust. Ensure adequate ventilation, especially in confined areas. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure all national/local regulation are observed.

**Personal Protective Equipment:** Gloves, protective goggles, protective clothing. Insufficient ventilation: wear respiratory protection.



**Materials for Protective Clothing:** Chemically resistant materials and fabrics.  
**Hand Protection:** Wear chemically resistant protective gloves.  
**Eye Protection:** Safety glasses with side shields, or goggles, are recommended.  
**Skin and Body Protection:** Not available  
**Respiratory Protection:** Use a NIOSH- approved respirator or self-contained breathing apparatus whenever exposure may exceed established Occupational Exposure Limits.  
**Other Information:** When using, do not eat, drink or smoke



# Safety Data Sheet

## Magnesium Hydroxide, Powder

According to Federal Register / Vol.77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision Date: 05/2023

Supersedes: 10/2022

Version 7.0

### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

#### 9.1 Information on Basic Physical and Chemical Properties

Physical State	Powder
Appearance	White Powder
Odor	No odor
Odor Threshold	Not available
pH	~10 (saturated sol)
Evaporation Rate	Not available
Melting Point	Not available
Freezing Point	<32°F (0.00°C)
Boiling Point	Not available
Flash Point	Not available
Auto-ignition Temperature	Not available
Decomposition Temperature	350°C (662°F)
Flammability (solid/gas)	Not available
Lower Flammable Limit	Not available
Upper Flammable Limit	Not available
Vapor Pressure	Not available
Relative Vapor Density at 20°C	Not available
Relative Density	Not available
Specific Gravity	1.42 g/cm <sup>3</sup>
Solubility	Water: Slightly
Partition Coefficient: N-octanol/water	Not available
Viscosity	Not available
Explosion Data:	
Sensitivity to Mechanical Impact:	Not expected to present an explosion hazard due to mechanical impact
Sensitivity to Static Discharge:	Not expected to present an explosion hazard due to static discharge

### SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity:	Hazardous reactions will not occur under normal conditions
10.2 Chemical Stability:	Stable under recommended handling and storage conditions (see section 7)
10.3 Incompatible Materials	Strong acids, strong bases, strong oxidizers, halogenated compounds, reactive metal powders.
10.4 Hazardous Decomposition Products:	Carbon Oxides (CO, CO <sub>2</sub> )



# Safety Data Sheet

## Magnesium Hydroxide, Powder

According to Federal Register / Vol.77, No. 58 / Monday, March 26, 2012 / Rules and Regulations  
 Revision Date: 05/2023      Supersedes: 10/2022      Version 7.0

### SECTION 11: TOXICOLOGICAL INFORMATION

#### 11.1 Information on Toxicological Effects --- Product

Acute Toxicity:	Not classified
LD50 and LC50 Data:	Not available
Skin Corrosion/Irritation:	Not classified
pH:	~10 (saturated sol)
Serious Eye Damage/Irritation:	Not classified
Respiratory or Skin Sensitization:	Not classified
Germ Cell Mutagenicity:	Not classified
Teratogenicity:	Not available
Carcinogenicity:	Not classified
Specific Target Organ Toxicity (Repeated Exposure):	Not classified
Reproductive Toxicity:	Not classified
Specific Target Organ Toxicity (Single Exposure):	Not classified
Aspiration Hazard:	Not classified
Symptoms/Injuries After Inhalation:	Prolonged contact with large amounts of dust may cause mechanical irritation.
Symptoms/Injuries After Skin Contact:	Skin contact with large amounts of dust may cause mechanical irritation.
Symptoms/Injuries After Eye Contact:	Eye contact with dust may cause mechanical irritation.
Symptoms/Injuries After Ingestion:	Ingestion is likely to be harmful or have adverse effects.

#### 11.2 Information on Toxicological Effects --- Ingredient(s)

LD50 and LC50 Data:

Water (7732-18-5)	
LD50 Oral Rat	> 90000 mg/kg

### SECTION 12: ECOLOGICAL INFORMATION

#### 12.1 Toxicity

Toxicity for Magnesium Hydroxide (CAS#1309-42-8) per EPA 2002a and 2002b

Acute Toxicity		
Test Species	Test Duration	LC <sub>50</sub> (mg/L)
Ceriodaphnia dubia	48 hr.	333.8
Pimephales promelas	96 hr.	>493



# Safety Data Sheet

## Magnesium Hydroxide, Powder

According to Federal Register / Vol.77, No. 58 / Monday, March 26, 2012 / Rules and Regulations  
 Revision Date: 05/2023      Supersedes: 10/2022      Version 7.0

### SECTION 12: ECOLOGICAL INFORMATION

Chronic Toxicity, Survival			
Test Species	Test Duration	NOEC (mg/L)	EC <sub>25</sub> (mg/L)
Ceriodaphnia dubia	7 days	493	358.7
Pimephales promelas	7 days	493	>493

  

Chronic Toxicity, Reproduction/Growth			
Test Species	Test Duration	NOEC (mg/L)	IC <sub>25</sub> (mg/L)
Ceriodaphnia dubia	7 days	70	81.3
Pimephales promelas	7 days	70	383.4

#### 12.2 Persistence and Degradability

Magnesium Hydroxide, Powder:      Not established

#### 12.3 Bio accumulative Potential

Magnesium Hydroxide, Powder:      Not established

#### 12.4 Mobility in Soil

Not available

#### 12.5 Other Adverse Effects

Other Information:      Avoid release to the environment

### SECTION 13: DISPOSAL CONSIDERATIONS

#### 13.1 Waste Treatment Methods

Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.

### SECTION 14: TRANSPORTATION INFORMATION

14.1 In Accordance with DOT

Not regulated for transport

14.2 In Accordance with IMDG

Not regulated for transport

14.3 In Accordance with IATA

Not regulated for transport

14.4 In Accordance with TDG

Not regulated for transport



